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AUTHOR Walleri, R. Dan
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ABSTRACT

This five-part report provides background for a research design for the study of student attrition and retention in the community college. After Part I introduces the larger study of high risk students for which this paper was prepared, Part II defines the concepts of retention and attrition with respect to the attainment of student objectives rather than to graduation rates. Part III assesses the magnitude of the problem of student attrition in the community college as opposed to the four-year college. This section points out that some forms of attrition may be congruent with student objectives, examines attrition statistics for a typical community college, and cites findings from a statewide study of attrition in California. Part IV reviews the literature on attrition/retention in terms of: (1) student characteristics (e.g., background traits and motivational, financial, and employment patterns); (2) institutional characteristics (e.g., college image and availability of student services); (3) student-college interaction effects (i.e., the "fit" between college and student); and (4) societal factors (e.g., military draft and economic conditions). The applicability of each of these areas to the community college is assessed, revealing that some factors are more significant for four-year colleges. Part V recommends a research design for attrition/retention studies which uses the attainment of student objectives as the measure of success. An extensive bibliography is appended. (KL)

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STUDENT RETENTION AND ATTRITION IN THE COMMUNITY COLLEGE: A REVIEW AND RESEARCH DESIGN*

R. Dan Walleri
Research Office
Mt. Hood Community College

*The author gratefully acknowledges research support from the Oregon Community College Deans of Students Consortium. The views expressed herein are not necessarily those of the Consortium.

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STUDENT RETENTION AND ATTRITION IN THE COMMUNITY COLLEGE
A REVIEW AND RESEARCH DESIGN

1 INTRODUCTION

This paper has been prepared in support of a larger project dealing with the problem of "high risk students." The project was initiated in the Spring of 1979 by a consortium composed of the Deans of Students of the thirteen Oregon community colleges. Financial support in the form of grant monies has been provided by the Student Services Section of the Oregon Department of Education. The consortium has been studying several areas including assessment, developmental education, career development and faculty advising in an effort to improve opportunities for student success (Searcy, 1980).

In an earlier paper prepared for this project, Segara (1980) found that none of the Oregon community colleges had developed a formal student tracking system and that few had created a system for identifying high risk students. Although this situation is certainly understandable in light of the limited resources for the development of such a system, it does represent a serious information gap given the increasing concern in higher education with student retention and attrition.

This paper is intended as an initial effort toward the goal of designing a system for the study of student retention and attrition within the community college. The first two parts of the paper are devoted to defining the nature and scope of retention and attrition. A major assumption underlying these sections is that the causes and consequences of student retention and attrition in the community college are quite different from those which occur in traditional four-year colleges and universities. These differences are further elaborated in the third part of the paper which reviews the literature and describes factors affecting retention and attrition. That is, the differences in student retention and attrition between the two and four-year schools lie in the characteristics of students attending each and the nature of the community college as an institution. On the basis of developing a clearer picture of student retention and attrition in the community college, the fourth part of this paper proposes research strategies and recommendations for further study.

2 DEFINING STUDENT RETENTION AND ATTRITION

Most research on student retention is based on four-year colleges and either implicitly or explicitly defines retention as on-time graduation (within four to five years) from the institution of first

matriculation. For this and other reasons discussed below, much of this research has limited application to the community college. The major problem with this traditional definition of retention for the community college is the requirement of formal graduation.

Students attending a community college can usually be classified into several distinct groups including vocational-technical (either preparatory or occupational upgrading), lower division transfer, special programs (developmental education, GED, English as a Second Language, etc.) and community education (adult self-enrichment courses).

Graduation has the most relevance for the vocational preparatory students since their community college degree is terminal in many cases. Graduation from the community college has less relevance for lower division transfer students since their intent is to transfer and obtain a four-year degree. This is also true of many vocational students. For students in special programs and community education, retention can be defined meaningfully only in terms of student objectives. These objectives can vary from the completion of one course for personal enrichment to obtaining a GED or to acquiring basic skills for continuing with a college education. Thus, although the vast majority of students who attend the community college do not obtain a degree from the college, this in and of itself does not suggest a "retention problem."

What it does suggest is that there are different types of retention and

attrition and that the problem is to identify under what circumstances attrition is harmful in terms of institutional vitality and, more importantly, in terms of students' educational and vocational aspirations.

In the next section of this paper an attempt is made to describe in quantitative terms how serious attrition is in the community college. Before proceeding we need to complete our task of defining retention and attrition in conceptual terms. We have already noted the limited utility of defining retention in terms of obtaining a formal degree. On-time graduation has even less relevance since the vast majority of students in the community college attend on a part-time basis.

As an alternative to graduation, retention can be defined in terms of program completion. This approach is especially relevant to vocational students who often obtain the skills needed to secure employment in their chosen field without acquiring the degree. Much of the attrition in vocational-technical education, especially in fields where there is a shortage of skilled labor, can be explained simply by students leaving school due to job opportunities. Retention can also be defined in terms of course completion which is especially appropriate in the area of community education. It should be noted that this paper deals with withdrawal from college as opposed to course attrition. A review by Friedlander (1981) suggests that these two types of attrition represent two very different problems. That is, course attrition is more often caused by poor academic performance and being underprepared than in the case of complete withdrawal from college.

A definition of retention and attrition that would encompass all of the above would be one based on student objectives. Because student objectives can change over time such a definition does present problems, especially in terms of measurement. However, given the complex nature of the community college, it is probably the most defensible.

3 HOW SERIOUS IS ATTRITION

The issue of student retention and attrition has become more important in higher education over the past few years because of fewer people in the age group traditionally thought to be going to college. To a limited extent, this decline in traditional enrollments can be offset by increasing enrollment among non-traditional groups. However, it remains an open question as to how much the expansion of the educational market can offset the decline in traditional clientele. In any case, community colleges already serve a high proportion of non-traditional students. That service was one of the major factors in the development and growth of community colleges.

Another approach in dealing with projected enrollment declines is to reduce attrition. This is an especially important area for the community colleges since attrition is highest among two-year public

colleges. Nonetheless, the problem of attrition must be approached in realistic terms. It should be understood that it is not within a college's capability to prevent most attrition. There is also a certain amount of attrition that a college should not attempt to prevent since it may be in the best interests of the student. A college should be concerned with that portion of student attrition that occurs because of institutional weaknesses or failures.

When attrition is approached with this perspective, the objective becomes more than just maintaining enrollment levels. Rather, the goal becomes one of helping students define and achieve their educational and vocational objectives, and thus preventing the immense waste of individual and societal resources when students fail to achieve their goals. For this reason, it is important to carefully define the nature and scope of student retention and attrition.

It is estimated that about 40% of the full-time students attending two-year public colleges will graduate on-time, that is, within two to three years (Lenning, Beal and Sauer, 1980: pp. 10-12). The corresponding figure for four-year public colleges is a little over 50% (of course, in private colleges graduation rates are much higher). It should also be noted that these percentages have remained relatively constant over the last 40 years. Data compiled by Cope and Hannah (1975) suggest that these graduation rates increase significantly when the qualification of "on-time" is removed. That is, many students withdraw and then later return to their original college or another college and complete their education.

As suggested in Part I, these data have limited meaning in the context of the community college, especially when one considers the fact that two-thirds or more of the students attend on a part-time basis. Of all students attending a particular two-year public college, it is probably safe to say that no more than 5% will ever obtain a degree from that college. What about the other 95%?

As an example, let us examine 1000 students attending a typical comprehensive community college. Let us estimate that 30 will graduate on-time with another 20 eventually graduating for our 5%. Of course, there will be about 300 or 30% in community education, occupational upgrading and other special programs in which graduation is not relevant. There is also another 30% who will transfer (e.g. lower division collegiate and pre-professional students). So far we have reduced our attrition "problem" from 95% to 35%. From this remaining 35% we will have to subtract a considerable number of vocational students who have simply left before graduation because of job opportunities. We would also have to subtract those students who for various reasons are simply not ready to pursue college. That is, not all attrition is bad either for the student or the institution. These two factors alone could account for another 10-20%.

A large number of students will withdraw for reasons that there is little the college could do to prevent. Health, financial, family and other personal problems can be cited. A common reason for withdrawal from community college is a conflict between work and class schedule. Finally, there will also be a number of students who will simply fail

for a lack of background preparation, poor study habits or a mismatch between aspirations and aptitude or ability. This latter problem is not uncommon in some of the more technical or demanding vocational programs.

Although the above figures are hypothetical, they are representative of the experience at many community colleges. For example, preliminary findings from the California community college Statewide Longitudinal Study tend to confirm the above general description of attrition in the community college (Hunter and Sheldon, 1980: Part III).

This study is in its third year (it began in 1978-79) and involves a random sample of almost 6,000 first-time students from fifteen colleges. More than half of the sample withdrew during the first year. These students tended to be older, attended part-time and primarily to improve job skills, and held higher paying, higher skill positions than those who persisted. The interrelationship between work, education and attrition was directly confirmed when these former students were interviewed with regard to reasons for withdrawal. "Job conflict" and "preference for job over school" were the two most frequently given responses.

On the basis of these preliminary findings, Hunter and Sheldon (1980 - Part III: 60) argue that there are three types of attrition: positive, neutral and negative. Positive withdrawal includes "met objective" and "transfer". Neutral attrition, the most common, covers "conflict with another school", "job conflict", and "preference for job

over school". Negative attrition was identified as "indefinite motivation" and "underprepared". These latter reasons once again indicate the importance of counseling and placement for student success.

The findings reported by Hunter and Sheldon also show significant similarities and differences between vocational and non-vocational students. Both groups were just as likely to have withdrawn because of transferring to another college or being underprepared. Vocational students were more likely to have withdrawn because they had met their objective or prefered job over school than the non-vocational students. These latter students were more likely to indicate conflict with another school, job conflict and indefinite motivation.

Hopefully, a more accurate perspective on the problem of attrition in the community college has been provided. The difficult research task is to help in identifying those students whom the college could better serve in achieving their educational and vocational objectives. In an effort toward building a research design, we now turn to a review of the literature dealing with factors affecting retention and attrition.

As discussed above, most of the research on factors associated with student retention and attrition is based on four-year colleges with traditional full-time college age students. This factor alone reduces the application of this research to the community college. In addition there are two more general qualifications which must be considered in interpreting the research on retention and attrition.

First, most of the research is based on follow-up surveys with variable response rates. Although many researchers, such as Astin (1975), have carefully attempted to reduce the bias that non-respondents can have on results, the potential for skewed findings remain. Further, the research as a whole reflects varied approaches in design, sample frame and variables analyzed. As a result, the findings are often contradictory with corresponding problems in drawing generalizations. From an institutional perspective, the best research on retention and attrition is that conducted at that particular college.

Second, most of the factors associated with student retention and attrition are identified on the basis of statistical significance. Although within the research community statistical significance does represent an essential element in identifying key variables, the findings may have little substantive significance in terms of policy.

As Cope and Hannah (1975: 13) point out:

> In similar multivariate studies, Astin (1964), Panos and Astin (1967), Bayer (1968), and Mehra (1973) investigated the combined capability of from 36 to 120 student input variables to predict withdrawal. These studies found that the multiple correlations of all significant variables accounted for about 10 percent of the criterion variance.

The major thrust of retention research is to be able to identify which types of students are most likely to withdraw. However, with only 10% of the variance in withdrawals explained, there is simply no basis for meaningful predictions.

Even with these qualifications in mind, it is important to examine the research on retention and attrition. The findings have been consistent enough to produce a cumulative body of knowledge about how to identify which students are most likely to withdraw. In the process of this review, an effort will be made to identify those factors found in the general research which are most applicable to the community college environment.

The factors associated with student retention and attrition can be grouped into four classes: student characteristics, institutional characteristics, the interaction effects between student and institution, and societal or external factors. (Lenning, Beal and Sauer, 1980). (note #1)

4.1 Student Characteristics

This first group can be further broken down into two major subgroups: background traits or those attributes a student brings to college and process attributes or those factors influencing student behavior while in college.

Of the background variables, previous academic performance (high school GPA), study habits, and quality of high school are the best predictors of persistence. In terms of motivation, level of degree aspiration (the higher the degree aspired to, the greater the persistence), vocational or occupational goals, and commitment are the most important. Initial performance as measured by first term grades is also a key variable in predicting persistence. Combining all these factors lends support to the emphasis given in the literature to orientation, placement, and academic, career and personal counseling as important areas for improving retention. The fact that improvements in these areas often produce better retention rates verifies their importance. The findings with regard to high school GPA and first-term grades suggest that the use of non-punitive grading policies and Mastery Learning be given greater attention (Zwerling, 1980: 56).

Other background variables discussed in the literature include

academic aptitude (test scores), age, sex, socio-economic status, race, hometown, and size of high school. Although the research has not shown a consistent relationship between these factors and persistence, some of the research does suggest that these factors can be important in explaining attrition under certain conditions. For example, size of high school does predict persistence depending on the type of institution involved (students from small high schools are more likely to persist when they choose a small college). Men and women may withdraw for different reasons but their rate of withdrawal are similar.

Student process variables include psychological or motivational, financial and employment patterns. Peer group influence and the degree of satisfaction or dissatisfaction with institutional environment have been found to be the most important psychological factors. Many researchers argue that a student's ability to endure dissatisfaction is more important in explaining persistence than the actual degree of dissatisfaction.

Financial hardship is an often self-reported reason for withdrawal. Although certainly valid in some cases, most researchers doubt that it is as important a factor as student surveys would suggest. Perhaps student concern over finances is more important than the actual degree of financial hardship.

The type and amount of financial aid is often found to be associated with persistence. Large grants and scholarships and part-time

employment on campus (work-study) have been found to be positive whereas loans and financial aid packages (e.g., mix of loans, grants, etc.) have a negative association with persistence. Loans lead to anxiety over the financial debt being accumulated (especially among men) and thus, is likely to lead to withdrawal more often than for students without loans.

As mentioned above, part-time employment on campus has a positive relationship with persistence. Improving on-campus employment opportunities for students has been found to improve general institutional performance as well. Off campus, full-time employment has a negative effect on persistence. Attrition is especially high among students holding program related jobs. This is a very common reason for attrition in community colleges, especially in the vocational programs. Of course, it is another question as to whether a college should attempt to reduce this type of attrition, since the primary purpose of vocational education is to prepare the student for employment. Further, there is little evidence that this type of attrition has any short-term or long-term adverse consequences for the student.

4.2 Institutional Characteristics

Although not completely irrelevant, institutional characteristics identified in the literature as affecting student persistence have less application to the community college than other segments of higher education. Students attend a community college primarily because of low cost, convenient location or for particular programs (e.g. vocational-technical). Other institutional characteristics are of secondary importance.

A college with a selective or quality image will have higher student persistence rates. This factor overlaps with the fact that private versus public and four-year versus two-year colleges have higher retention rates. The finding that higher cost colleges have higher retention rates also relates back to image.

Community colleges are usually very conscious of their public image, especially in states such as Oregon where local property taxes form a major portion of the college's financial foundation. This same image also plays a significant role in attracting and retaining students.

The availability and quality of student services (orientation, counseling, academic advising, and developmental education) have

also been found to have a positive impact on student persistence. As mentioned earlier, improvements in these areas have often resulted in increased retention rates.

A college's mission and religious affiliation also impact on student persistence. These factors are important primarily in terms of student "fit" which is discussed further below under student-institution interaction effects. Students living in college housing (residence halls) have higher persistence than students living off campus. This factor is more a function of student involvement than residence halls per se, and in any case, has little application to the community college.

Most of the research dealing with institutional characteristics identify student involvement as the key element in determining retention rates. That is, any factor that increases student involvement with the institution will have a positive effect on persistence. This would include extra curricular activities, peer and student-faculty relationships, and the quality and diversity of academic programs. Student involvement also relates to other factors previously discussed such as on-campus employment.

Little research has been done on the effect of administrative policy on student retention and attrition. Retention studies in general do indicate, however, that removing administrative obstacles to withdrawal and making it easier to re-enroll would have a positive impact on student retention. Community colleges are usually in good

shape here, given their open entry, open exit nature. Exit interviews should not be considered an obstacle to withdrawal. Rather, exit interviews usually have a positive impact on reducing attrition as well as shedding light on the reasons for its occurrence. Although the findings are not consistent, most retention research now suggests that the policy of placing students on probabtion is either non-productive or counter productive in reducing attrition (Zwerling, 1980: 56). In sum, a personal, caring attitude on the part of the college's administration is only logical in light of the findings reported in research on retention.

4.3 Student - Institution Interaction Effects

The research on student retention and attrition has increasingly come to emphasize the fit between student and institution as the key factor in explaining persistence. For example, students from small high schools are more likely to persist in small colleges. Students who have a similar religious or philosophical perspective to that of the college they are attending are also more likely to persist. As with the notion of "student involvement", the concept of "fit" between the individual and institution has become a unifiying concept in the study of student and institutional characteristics as they relate to retention and attrition.

The notion of fit does not imply homogeneity, however. There is no evidence that persistence is increased when the student population is composed of individuals with roughly equal academic ability. That is, there is no justification in the retention research for selective admissions policies.

The concept of fit between student and college has limited application to the community college. The community college often presents the only viable option for students seeking a higher education. For students not aspiring to a four-year professional degree, community colleges provide the only option for vocational-technical training within a college environment. In the area of transfer and pre-professional education, community colleges provide smaller classes and more personal attention than is feasible for large university systems to offer. For students who need it, community colleges provide a period of transition. Thus, because of the diversity of needs served and because of the practical considerations that draw students to the community college, it is difficult to adapt the concept of fit to the community college environment. The challenge facing a community college is to develop an institution flexible enough to respond to the diverse needs of a very heterogeneous audience without allowing the academic experience to become diluted.

4.4 Societal Factors Affecting Retention

There are many external or societal factors that help to shape and influence the direction of higher education in general and student persistence in particular. There is little doubt that the military draft acted as an incentive for students to remain in college longer than they might have otherwise. Economic conditions also affect enrollment patterns, although this usually occurs within a time-lag relationship. That is, a sustained economic downturn will eventually lead to higher enrollment. Likewise, a recession is likely to lead students to remain in college longer while an expanding economy will likely produce greater attrition.

General attitudes toward the value of higher education will also affect retention and attrition rates. When students view education as an end in itself, even if only in terms of degree credentials, persistence is likely to increase. When students view education as a means to an end (e.g. a job), then attrition rates are likely to increase.

4.5 Summary and Implications with Regard to the Community College

Although the research on retention does not allow a particular college to predict student persistence with substantive reliability, it does indicate areas which are important if attrition is to be reduced. The findings with regard to student background characteristics verifies the current emphasis being placed on proper placement, orientation, counseling, academic advising and developmental education. The research also suggests that students who need help in these areas should receive it as early as possible in their college experience.

If all goes well through the first term of attendance, continued persistence is often a function of how deeply involved the student becomes in campus and academic life. The development of strong personal relationships, the quality of academic programs, extra-curricula activities, the availability of on-campus part-time employment, the amount and type of financial aid among others all bear on the probabilities of retaining students and promoting a worthwhile college experience.

The dilemma facing community colleges is that most, if not all, of the above factors are most applicable to the full-time student while the vast majority of community college students attend on a part-time basis. Furthermore, trends indicate that part-time

enrollment will increasingly define the character of community colleges. Most research on retention is based on the experience of full-time students as is the case for most research conducted at a particular community college. Community colleges know least about the most important segment of their student population.

Part-time students are the least likely to make use of counseling and other services. Part-time students are the least likely to become intimately involved in campus and academic life. For most part-time students, education is low on their list of priorities, trailing family, work and other responsibilities and obligations. The part-time student is the most likely to withdraw, and the community college has limited capabilities for influencing that decision.

In meeting the needs of the part-time student it is important to distinguish between types. For example, enrollment in community education and occupational upgrading courses will by its nature be selective and discontinuous. The part-time student pursuing a long-term objective, such as a degree or the skills necessary for a particular career field, is a different matter. Factors associated with success in meeting such goals are likely to be quite different than for the full-time student. Flexible scheduling and the development of alternative modes of delivering education are more likely to be effective for the part-time student than the factors associated with the persistence of full-time students. Retention strategies in the community college will by necessity be

multi-faceted and tailored to the specific needs of identifiable groups within the general student population.

5 RESEARCH STRATEGIES AND RECOMMENDATIONS

Many if not most students who withdraw from a community college do so for valid reasons. A decision to pursue alternative options such as work or circumstances beyond the college's control (health, finances, family problems, etc.) accounts for the greatest amount of attrition. Most withdrawals are not due to dissatisfaction with the institution. Many of the students are satisfied with the help that they did receive and will often continue their education at a later time. Any research program designed to measure the rate and causes of attrition must incorporate the notion that not all attrition is bad or can be prevented by the institution.

As discussed previously, community colleges serve diverse student needs and objectives. The research design must accommodate the fact that most students attending the institution do not intend to obtain a degree. To produce meaningful results, the research design must begin with student objectives. Successful retention is measured as the degree to which each student achieves his/her own educational objectives.

Most retention studies begin with a survey of first-time students for a particular fall term. It is important that all of these students be surveyed (e.g. during the registration process) or that valid sampling techniques be employed to protect against the bias in findings caused by a large number of non-respondents. The survey would gather information on student objectives and aspirations, background characteristics, and other items deemed important by the particular college. (note #2)

The results of this initial survey would be used to establish the criteria upon which to monitor student success in terms of their own objectives. Information collected at this time could also be used to identify "high risk students". This would include poor previous academic performance, lack of clear objectives, or undeclared major. The college should make every possible effort to ensure that students identified as "high risk" receive adequate counseling and academic advising.

This same group of students would be tracked over a two year period. Anytime that a student did not re-enroll in a subsequent term, a survey would be mailed or conducted as part of an exit interview (this would include graduates unless a graduate follow-up system was already in existence). Enough resources would have to be committed to allow for a telephone follow-up of non-respondents. Otherwise, the results could become so skewed that little reliable information would be produced.

These follow-up surveys would measure the rate of attrition and

identify the reasons for its occurrence. One or two surveys of continuing students would also be helpful in identifying changes in student objectives and problem areas (just because a student persists does not mean that all is going well). The initial and follow-up surveys repeated over several years would establish the college's pattern of retention and attrition. The results of the surveys would provide valuable information for measuring student success and institutional effectiveness in both academic and service areas.

The above system should be supplemented by monitoring course and program retention. Once high areas of attrition have been identified, the reasons for its occurrence can be ascertained and if necessary, appropriate changes or improvements can be implemented.

Developing and implementing a research design on student retention requires a significant investment in institutional resources. It requires support and coordination between faculty and student services' staff. To develop policies and implement actual changes in an effort to reduce unwarranted attrition requires even more resources, support and coordination. It is important that both the costs and potential benefits be weighed before initiating such a project.

6 NOTES

1. For a review of factors associated with student retention from a quantitative perspective see Astin (1975). For a more subjective approach see Cope and Hannah (1975). For a recent and extensive bibliograhy see Lenning, Beal, and Sauer (1980).

2. Survey instruments of this type are available from numerous organizations such as the American College Testing Program.

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